

SCIENTIFIC NOTE

**CONFIRMATION OF THE PYGMY SNOWFLY,
ALLOCAPNIA PYGMAEA (BURMEISTER)
(PLECOPTERA: CAPNIIDAE),
FROM NORTH DAKOTA, UNITED STATES¹**B. C. Kondratieff² and R. W. Baumann³

Kondratieff and Baumann (1999) listed fifteen stonefly taxa, including eleven confirmed species for North Dakota. Included only as a genus record was the snowfly genus *Allocapnia* based on nymphs. We predicted that based on known distributional proximity, the most likely species of *Allocapnia* occurring in North Dakota would be *A. pygmaea* (Burmeister). Recently, a vial of *Allocapnia* specimens was brought to our attention by eminent coleopterist Robert D. Gordon at the National Museum of Natural History. He collected these stoneflies from a small stream in southeastern North Dakota, Sargent County. These specimens included four adult males of *A. pygmaea* allowing species confirmation. This sub-boreal species occurs in a transverse band across the northern United States and southern Canada, south to Tennessee, with disjunct populations in the Ozark Mountains of Missouri (Ross et al. 1967, Ross and Ricker 1971, Poulton and Stewart 1991). *Allocapnia* is considered an eastern deciduous forest associated group of stoneflies (Ross and Ricker 1971), and presently includes 43 species (Kondratieff and Kirchner 2000).

Ross et al. (1967) postulated that during the Wisconsin glacial maximum, *A. pygmaea* occurred south of the ice sheets in the Cumberland Plateau region of east central United States. Dispersal northward and westward of this species occurred during the post-Wisconsinan times, into deglaciated regions, following a northern route over the Great Lakes (see Ross et al. 1967, Fig. 2). An alternative hypothesis proposes that these North Dakota populations are remnants of northern dispersals from the Missouri Ozark populations. However, the North Dakota males are clearly most similar to northeastern populations and not to the males described by Ross et al. (1967) from Missouri. The Minnesota records of *A. pygmaea* are from areas along Lake Superior and south of Minneapolis next to nearby Michigan (Ross and Ricker 1971, Lager et al. 1979). Recently, Heimdal et al. (2004) reported *A. pygmaea* from northeastern Iowa. It then appears that the southeastern North Dakota populations of this species clearly fit the dispersal pattern proposed by Ross et al. (1967), and have originated from a single source.

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The Sargent County record represents the most western record for *Allocapnia* and outside the eastern deciduous forest biome.

Material Examined: North Dakota: Sargent Co., South of Cayuga, 7 miles NW of Verblen, South Dakota, 21 March 1966, R. D. Gordon, Aarhus and Tweten, 4 males, 1 female, 7 nymphs (National Museum of Natural History, Entomology, Washington, District of Columbia, U.S.A.).

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